



Alcan Aluminium Limited Annual Report 1971

"For Alcan, 1971 has proved the worth of an international operating and marketing structure, which has insulated us to some extent from the adverse fortunes of individual economies. Thus, even as we have experienced less favorable market conditions during the year in the United States, the United Kingdom, Europe and Japan, we have realized improved performances by our companies in areas which include Brazil, India, Australia and the fabricating operations in North America. The results of years of effort in these areas are now being felt, and we have every reason to expect that their contributions will increase, even as we start to benefit from improving conditions in the larger markets."

Alcan Aluminium Limited Principal Operating Subsidiaries and Related Companies 31 December 1971

North America

Canada

Aluminum Company of Canada, Ltd
Alcan Canada Products (Division)
Alcan Building Products Limited
Almetco (Division)
Alcan Pipe Limited*
Aluma Building Systems Inc.**
Aluminum Goods Limited
Canada Foils, Limited
Roberval and Saguenay Railway Company
Saguenay Power Company, Ltd
Saguenay Shipping Limited
Saguenay Transmission Company, Limited
Supreme Aluminum Industries Limited***

United States

Alcan Aluminum Corporation
Fabral Corporation**

Bermuda

Alcan (Bermuda) Limited

Caribbean

Guyana

Sprostons (Guyana) Limited

Jamaica

Alcan Jamaica Limited
Alcan Products of Jamaica Limited
Sprostons (Jamaica) Limited

Trinidad

Chaguaramas Terminals Limited
Sprostons (Trinidad) Limited

Latin America

Argentina

Camea S.A.I.C.***

Brazil

Alcan Alumínio do Brasil S.A.
Alumínio do Brasil Nordeste S.A.
Mineração Rio do Norte S.A.

Colombia

Alumínio Alcan de Colombia, S.A.*

Mexico

Alcan Alumínio, S.A.*

Uruguay

Alcan Alumínio del Uruguay S.A.*

Venezuela

Alcan de Venezuela, S.A.

Europe

Belgium

Alcan Aluminium Raeren S.A.

Denmark

Aluminord A/S*

France

Aluminium Alcan de France
Alcan-Schwartz, Filage et Oxydation*
S.A. des Bauxites et Alumines de
Provence
Société Industrielle de Transformation
et de Construction (SITRACO)***

Germany

Alcan Aluminiumwerke GmbH
Alcan Folienwerke GmbH & Co.
Kommanditgesellschaft*
Aluminium Norf GmbH**

Ireland

Unidare Limited***

Italy

Alcan Alluminio Italiano S.p.A.
Alcan Angeletti & Ciucani Alluminio
S.p.A.*

Europe (Continued)

Netherlands

Alcan Europe N.V.

Norway

A/S Ardal og Sunndal Verk (ASV)**
A/S Nordisk Aluminiumindustri**
DNN Aluminium A/S**

Spain

Empresa Nacional del Aluminio, S.A.
(ENDASA)***

Sweden

Gränges Essem AB***

Switzerland

Aluminiumwerke A.-G. Rorschach

United Kingdom

Alcan Booth Industries Limited*
Alcan Booth Extrusions Limited*
Alcan Booth Sheet Limited*
Alcan Castings & Forgings Limited*
Alcan Design Products Limited*
Alcan Ekco Limited***
Alcan Foils Limited*
Alcan Polyfoil Limited*
Alcan Wire Limited*
P.J. Bailey (Patent Glazing) Limited*
Thomas Bennett Limited**
Freight Bonallack Limited*
Johnson & Bloy Aluminium Pigments
Ltd***
E.C. Payter & Co., Ltd*
Tenon Contracts Limited*
Ulam Light Metal Company (1954)
Limited***
James H. Vickery & Co., Ltd*
Alcan Enfield Alloys Limited**
Alcan (U.K.) Limited
Saguenay Shipping (U.K.) Limited

Africa

Ghana

Ghana Aluminium Products Limited*

Guinea

Halco (Mining) Inc.***

Nigeria

Alcan Aluminium of Nigeria Limited*
Flag Aluminium Products Limited*

South Africa

Alcan Aluminium of South Africa Limited
Republic Aluminium Company (Pty)
Limited*

Asia

India

Indian Aluminium Company, Limited*

Japan

Nippon Light Metal Company, Ltd**
Toyo Aluminium K.K.**

Malaysia

Alcan Malaysia Berhad*
Southeast Asia Bauxites Limited*
Johore Mining and Stevedoring Co. Ltd*

Thailand

Alcan Thai Company Limited**

South Pacific

Australia

Alcan Australia Limited*
Alcan Queensland Pty Limited
Kawneer Company Pty Limited*
Queensland Alumina Limited**
Wm Breit & Company Pty Ltd*

New Zealand

Alcan New Zealand Limited*
Aluminium Conductors Limited***

Unless otherwise indicated, companies are 100% owned
*Less than 100% owned but more than 50%
**50% owned
***Less than 50% owned

Alcan Aluminium Limited

Directors Officers

Honorary Directors

Directors

Erik Brofoss

Washington — Executive Director of the International Monetary Fund

Fraser W. Bruce

Montreal — Director of various companies

David M. Culver

Montreal — Executive Vice President

Dr. Donald K. David

*Osterville, Massachusetts
Former Vice Chairman of the Board, Ford Foundation*

Nathanael V. Davis

Montreal — Chairman of the Board and Chief Executive Officer

John H. Hale

Montreal — Executive Vice President

The Rt. Hon. Viscount Harcourt, K.C.M.G., O.B.E.

London — Chairman of Morgan Grenfell Holdings Limited

James T. Hill, Jr.

New York — Director of various companies

Paul LaRoque

Montreal — Vice President

Paul H. Leman

Montreal — President

Donald D. MacKay

Montreal — Executive Vice President

Hon. James Sinclair, P.C.

Vancouver — Deputy Chairman of Canada Cement Lafarge Ltd

Manoel B. de Sousa Pernes

Geneva — Chairman of Alcan Aluminium S.A.

Hon. John L. Sullivan

Washington — Attorney, Sullivan, Beauregard, Meyers & Clarkson

James A. Dullea

Westport, Connecticut

R. E. Powell

*Montreal
Honorary Chairman, Aluminum Company of Canada, Ltd*

H. H. Richardson

Montreal

M. P. Weigel

Montreal

Officers

Nathanael V. Davis

Chairman of the Board and Chief Executive Officer

Paul H. Leman

President

J. W. Cameron

Executive Vice President, Smelting

David M. Culver

Executive Vice President, Fabricating and Sales

John H. Hale

Executive Vice President, Finance, and Treasurer

Donald D. MacKay

Executive Vice President, Raw Materials

Roy A. Gentles

Planning Coordinator

Paul LaRoque

Vice President, Secretary and Chief Legal Officer

Holbrook R. Davis

Chief Employee Relations Officer

Dr. J. F. Horwood

Chief Technical Officer

Duncan C. Campbell

Chief Public Relations Officer

A. A. Bruneau

Chief Administrative Officer

K. C. Bala

Assistant Secretary

W. B. Findlay

Assistant Secretary

D. K. Petapiece

Assistant Secretary

H. L. Carstairs

Assistant Treasurer

A. A. Hodgson

Assistant Treasurer

W. E. F. Johnson

Assistant Treasurer

George O. Morgan

Assistant Treasurer, Zurich

The Annual Meeting of the shareholders of Alcan Aluminium Limited will be held on Thursday, 6 April 1972, at 10 a.m. in the Hotel Bonaventure, Montreal.

Terms: In this report, all amounts are in United States dollars and all quantities are in short tons of 2,000 pounds each, unless otherwise stated.

"Subsidiary" indicates a company directly or indirectly more than 50 percent-owned whereas "related company" indicates a company 50 percent or less owned.

The term "Alcan" refers to the parent Alcan Aluminium Limited itself, or to one or more subsidiaries according to the context.

Alcan Aluminium Limited

1 Place Ville Marie, Montreal, Canada
Mail: Box 6090, Montreal 101, Canada

On pourra se procurer le texte français de ce rapport annuel en s'adressant au secrétariat de la Compagnie, case postale 6090, Montréal 101, Canada.

Alcan Aluminium Limited

Highlights and Summary of the Year 1971

Alcan's consolidated shipments of aluminum rose four percent to a new record of 1,398,000 tons with the proportion in fabricated form increasing to 55 percent from 51 percent in 1970.

Sales of fabricated aluminum products by consolidated subsidiaries and related companies topped 1,000,000 tons for the first time.

Because of surplus production and excessive inventories in the aluminum industry, there was erosion of prices in most markets and profits suffered generally. To promote better balance of supply and demand, many producers, including Alcan, cut production.

The much improved earnings of certain subsidiaries operating in self-contained national markets and the increased volume of fabricated products sales helped hold the decline in Alcan's net income to 17 percent, from \$2.11 per share in 1970 to \$1.75 per share in 1971.

Alcan's Canadian smelters produced 945,000 tons in 1971 and are currently operating at 86 percent of their 1,035,000-ton annual capacity.

Production of smelters outside Canada, including related companies, reached a total of 920,000 tons, a new high, but less than their rated capacity.

Year ending 31 December

	1971	1970
Sales of all aluminum products (<i>tons</i>)	1,398,000	1,346,000
Sales of fabricated products (<i>tons</i>)	772,000	691,000
Sales of fabricated products (<i>millions of U.S. \$</i>)	\$ 821	\$ 723
Gross revenues (<i>millions of U.S. \$</i>)	\$1,449	\$1,385
Net income, incl. extraordinary profit (<i>millions of U.S. \$</i>)	\$ 60.2	\$ 81.0
Profit per common share, excluding extraordinary profit	\$ 1.75	\$ 2.11
Dividends per common share	\$ 1.00	\$ 1.20
Additions to plant and investments (<i>millions of U.S. \$</i>)	\$ 153	\$ 165

As at 31 December

Total assets (<i>millions of U.S. \$</i>)	\$2,297	\$2,215
Long-term debt (<i>millions of U.S. \$</i>)	\$ 740	\$ 751
Common shareholders' equity (<i>millions of U.S. \$</i>)	\$ 816	\$ 792
Book value per common share	\$24.78	\$24.03
Number of common shares outstanding (<i>millions</i>)	32.94	32.94
Number of common shareholders	69,558	75,912
Percentage of common shares held		
By residents of Canada	48.8%	40.6%
By residents of U.S.A.	39.4%	47.8%
By residents of other countries	11.8%	11.6%
Number of employees	60,600	66,500

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1 Alcan Aluminum Corporation, U.S.A.	23

The year 1971 was a difficult year for the aluminum industry in most world markets. Total smelter production exceeded demand by a considerable margin, resulting in large increases in inventories of aluminum and serious erosion of prices and profits as the year progressed. However, the deterioration in prices and profits did not affect all markets in which Alcan operates. In these circumstances, the combined financial results of the Company's activities in many areas, while less than realized in 1970, stood up relatively well.

The Company's total consolidated net profit in 1971 was U.S. \$60.2 million as compared with U.S. \$72 million in 1970, although the latter figure excluded an extraordinary gain of \$9 million. Net income for Alcan common shares in 1971 was U.S. \$1.75 per share against an adjusted U.S. \$2.11 per share before the extraordinary gain in 1970, a decline of 17 percent.

Alcan's consolidated gross revenues in 1971 were U.S. \$1,449 million and total aluminum shipments reached 1,398,000 tons, a growth of four percent in each case. These increases reflect a gain of 81,000 tons, or 12 percent, in sales of fabricated products, offsetting a decline in the Company's sales of ingot products.

Alcan's progress in fabricated products sales was particularly strong in Canada and the United States. Total metal deliveries in these two countries, including ingot to traditional customers, accounted for approximately 60 percent of Alcan's total Canadian ingot production.

The growth in the Company's fabricating activities, both in North America and abroad, has contributed materially to the Company's ability to maintain and increase its overall level of sales. As an indication of growth in the field of fabricating, the development of our relatively new fabricating facility in the United States, Alcan Aluminum Corporation, is featured in the back pages of this report, starting on page 23.

Primary production at the Company's Canadian smelters was cut back during the course of the year to the current operating rate of approximately 86 percent of capacity. Similarly, the Company's two main affiliates in Norway and Japan reduced levels of production to maintain inventories at realistic levels.

2 These reductions, and similar action taken by

several other producers, were necessitated by a wave of expansion of primary capacity which occurred during the year, far exceeding the needs of the market. We estimate that free-world capacity increased by the striking amount of 18 percent or 1.7 million tons in 1971, while demand grew at a far smaller rate of approximately five percent. Clearly, as shown on the chart below, 1971 was a year of severe imbalance and, although production levels were curtailed, inventories of primary aluminum increased by an estimated 500,000 tons.

There are some encouraging signs that many aluminum producers of the world are increasingly willing to curtail production until better balance is restored between supply and demand, and to defer new smelter projects until there is a clear need for the output.

Estimates of consumption for 1972 are somewhat more buoyant than last year. If the predicted upturn in the U.S. economy occurs this year, we anticipate improved aluminum demand in that major market. We also expect stronger markets in Britain and Japan. Together, these increases should support a growth of seven to eight percent in free-world consumption this year, permitting some reduction of producers' inventories if primary output continues to be restrained.

On 15 July, Alcan's subsidiary, Demerara Bauxite Company, Limited, a producer of

Estimated changes in the world primary aluminum situation-1971 over 1970
(excluding communist countries)



bauxite and alumina, was nationalized by the Government of Guyana. On the eve of nationalization, a negotiated settlement was reached with the Government. Under the terms of this settlement, Alcan has received notes from the Government of Guyana in a principal amount of U.S. \$53.8 million payable over 20 years, with interest. The principal amount of the settlement is slightly in excess of the book value of the assets taken over. Our Company has, accordingly, suffered the loss of profits from this former subsidiary, but it is expected that there will be adequate alternative sources of supplies of bauxite and alumina to support the Company's primary production program.

The imposition of the United States surcharge on 15 August and the subsequent fluctuations in exchange rates created difficult selling problems throughout the latter part of the year. The Company was, however, able to maintain its volume of sales, although at reduced realizations. The removal of the United States surcharge on 20 December and the establishment of a more realistic relationship in currency values were welcome developments which should provide a sounder basis for international trade.

For Alcan, 1971 has proved the worth of an international operating and marketing structure, which has insulated us to some extent from the adverse fortunes of individual economies. Thus, even as we have experienced less favorable market conditions during the year in the United States, the United Kingdom, Europe and Japan, we have realized improved performances by our companies in areas which include Brazil, India, Australia and the fabricating operations in North America. The results of years of effort in these areas are now being felt, and we have reason to expect that their contributions will increase, even as we start to benefit from improving conditions in the larger markets.

The industry enters 1972 with the excess inventories which were built up in 1971. While we believe conditions in 1972 will support a higher volume of sales, price levels will be the main determinant of Alcan's earnings. Prices having declined progressively through 1971, a reversal of this trend is essential if earnings are even to maintain 1971 levels.

Reflecting the Company's current level of earnings and the anticipation of its continuing through the early part of 1972, the directors in January this year decided to reduce the quarterly dividend rate from 25 to 20 cents per

share. It is their belief that this action is necessary to enable the Company to maintain its essential capital program on a sound financial basis. This action also relates dividends to the trend of earnings as has been the Company's practice.

In December 1971, Mr. Knut Getz Wold, governor of the Central Bank of Norway, retired as a member of Alcan's board of directors after five years of service which is gratefully acknowledged. He was succeeded by Mr. Erik Brofoss, the Norwegian executive director of the International Monetary Fund in Washington.

Over the past several months, increasing attention has been given to the Company's management organization to improve its effectiveness as Alcan's activities have grown in size and complexity. The directors have acted upon by-law changes in order to broaden the management structure by creating separate positions of Chairman of the Board and President. I have been elected Chairman and have been designated by the directors as Chief Executive Officer. Mr. Paul H. Leman has been elected President and Mr. J. W. Cameron has been appointed Executive Vice President, Smelting, to succeed Mr. Leman in that position.

Nathaniel V. Davis

Montreal,
9 February 1972

Chairman of the Board

Alcan Aluminium Limited

Finance

John H. Hale

Executive Vice President

Some improved national results along with fabricating gains, currency and tax changes partially offset price declines and other adverse factors.

Sales of fabricated products rose 14 percent and represented three-quarters of total aluminum sales of \$1,105 million.

The lower prices obtained in major markets for primary aluminum ingot were the most important factor contributing to the decline in Alcan's 1971 net income to \$60.2 million. The average net sales realization on all types of ingot products was down by 1.9 cents a pound. Also, the nationalized raw materials operation in Guyana contributed about \$3 million less to consolidated profits. Further adverse features of the year were a less favorable economic environment in Europe and Japan and inflationary pressures on costs in essentially all areas of the world. Rising costs particularly affected the Jamaican raw materials operations.

On the positive side, the fully integrated aluminum operations in Brazil and India, two largely self-contained national markets, contributed \$12 million to consolidated 1971 net income, an increase of over \$6 million. Overall, the higher volume of fabricated aluminum product sales was an important factor. Also helpful was the upward valuation of most major currencies against the U.S. and Canadian dollars. Reduced losses in certain subsidiaries, modestly greater net non-taxable items and investment tax credits lowered the effective rate of income taxes.

The extension of equity accounting for companies 50 percent-owned to those 20 percent or more owned increased net income in 1971 by \$1.4 million and in 1970 by \$1.1 million.

Gross Revenues

Total revenues from sales and other sources amounted to a record \$1,449 million as compared with a restated \$1,385 million in 1970. Sales of fabricated aluminum products rose by \$98 million or 14 percent to \$821 million and represented three-quarters of total aluminum sales amounting to \$1,105 million. In 1961 fabricated products accounted for just over one-half of total aluminum sales amounting to \$402 million. The consolidation of new fabricating companies added about \$16 million to 1971 aluminum products sales.

Sales of products other than aluminum were \$277 million or slightly more than the restated 1970 amount. These now include Caribbean wholesale distributing activities formerly classified as "Operating revenues". Operating revenues from electric power were \$20 million as in 1970.

Alcan's equity in net income of companies 20-50 percent-owned of \$8.5 million for 1971 compares with \$10.6 million for 1970 on the same basis. In addition, Alcan's interest in the earnings of Queensland Alumina Limited, amounting to \$1.2 million in each of 1970 and

1971, was applied against the cost of goods received from this operation which toll contracts bauxite into alumina. The combined contribution of A/S Ardal og Sunndal Verk in Norway and Nippon Light Metal Company, in Japan declined in 1971 due principally to market conditions and rising costs.

The more important other Alcan investments now equity accounted are a 25 percent interest in Empresa Nacional del Aluminio, S.A., the largest aluminum smelting and fabricating company in Spain, a 21 percent interest in Gränges Essem AB, Sweden's only integrated aluminum smelting and fabricating concern, and a 27 percent interest in Halco (Mining) Inc., which holds a 51 percent interest in the Guinean bauxite project. The last mentioned contributed modest losses in 1970 and 1971.

Gross Profit

Total 1971 operating gross profit and other income was \$289 million. The comparable 1970 figure was \$303 million before extraordinary items or \$312 million if profit from exchange revaluation of Canadian working capital is included.

Reflecting the lower volume of shipments and declining selling prices, gross profit on aluminum ingot products dropped significantly both in total and on a per-ton basis. On the other hand, the substantial increase in shipments of fabricated aluminum products caused the integrated gross profit on this business to increase by \$14 million or 11 percent, and the gross margin on a per-ton basis to be well maintained. This was achieved despite unusually competitive conditions in many major markets. Total gross profit from aluminum operations at \$211 million for 1971 compares with \$215 million for 1970. Costs in the earlier year were affected to some extent by a strike at the Kitimat smelter and in 1971 by the smelters operating below capacity. Gross profit on sales of products other than aluminum and on operating revenues at \$60 million in 1971 was \$7 million lower.

Overhead Expenses

The \$12.3 million increase in 1971 consolidated selling, research and administrative expenses reflects worldwide inflationary conditions and a number of special factors. The consolidation of new fabricating companies and the costs of relocating or terminating employment of company people in Guyana were major items. Provision was also made for the costs of reducing the head office staff by about 11 percent. As elsewhere, these reductions reflect the need to improve productivity in all areas of the business.

Capital spending in 1972 is again set at about \$150 million, with the U.K. smelter still accounting for the largest single portion.

Consolidated gross profit fell in 1971 to \$289 million from the 1970 level of \$303 million, or \$312 million including extraordinary profit on exchange revaluation of Canadian working capital.

Interest paid on total borrowings rose \$3.4 million to \$63.6 million. Borrowings for the U.K. smelter and power plant and the consolidation of new companies largely account for this net increase.

Capital Expenditures

Net cash outlays in 1971 on fixed assets and investments totalled \$153 million, as compared with \$165 million in 1970. Almost two-fifths of 1971 outlays went towards construction of the U.K. smelter and power plant and a major realignment of fabricating facilities in that country. Modernization of the smelters in Canada, smelter expansion projects in Brazil and India and an additional investment in Nippon Light Metal involved a further one-quarter. The balance went to complete such major fabricating projects as the new sheet mill at Arvida, a variety of smaller fabricating projects, upgrading of existing raw materials facilities and the start of the Trombetas bauxite project in Brazil.

Consolidated 1971 cash generation from operations was \$157 million, \$21 million less than in the prior year. Dividends paid in 1971 on Alcan's preferred and common shares totalled \$35 million.

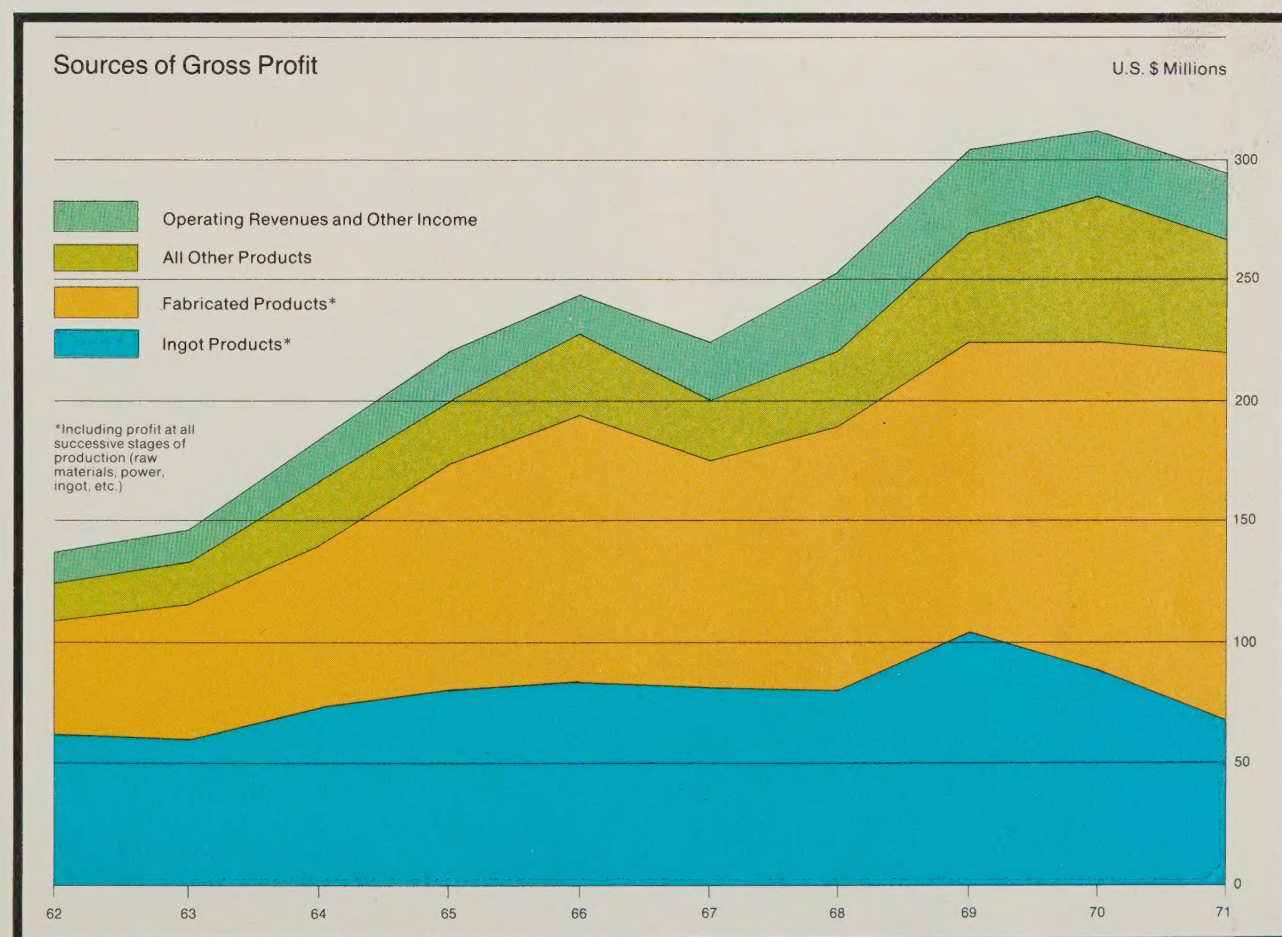
Borrowings

Total borrowed funds amounted to \$932 million at the end of 1971, a rise of \$50 million

over the year earlier. Short-term borrowings including the initiation of short-term promissory notes in Canada account for this increase. Early in the year, the proceeds from a Can. \$60 million debenture issue were used to repay borrowings outstanding under a medium-term revolving bank credit agreement. For the U.K. operations, arrangements were made for loans of \$30 million from two Canadian banks. At the beginning of 1972, a \$40 million medium-term Canadian private placement was completed in anticipation of heavy long-term debt maturities in 1973-1974. Later this year, a Swiss franc long-term public debenture issue in an amount equivalent to \$20-25 million is planned. Proceeds from the last three noted issues will reduce the short-term borrowings and provide an adequate cash reserve for the business.

Capital Spending in 1972

The capital budget contemplates cash outlays of about \$150 million in 1972. The U.K. smelter will again account for the largest single amount although a lesser proportion than in 1971. Spending on raw materials projects and in particular for the Trombetas project is budgeted to increase substantially. Expenditures in India are expected to be just under 10 percent of the total, as in 1971. Most of the planned fabricating projects are relatively modest in cost and directed towards further forward integration into end products.



Alcan Aluminium Limited

Raw Materials

Donald D. MacKay

Executive Vice President

New bauxite sources in Brazil and Guinea, and expansion elsewhere, will fill future needs and replace Guyana facilities nationalized in 1971.

Alcan's share of the output of the expanded alumina plant at Gladstone, Australia, is due to reach about 500,000 tons per annum in early 1973.

In 1971, the Raw Materials Division fulfilled its function of supplying bauxite and alumina to Alcan's Canadian smelters and to its smelting associates, and additionally made firmer plans to meet the long-term demand.

In the operational and planning aspects, the most significant change arose from the fact that on 15 July the assets of the Demerara Bauxite Company, a main source of bauxite for Alcan's Canadian alumina plants for many years, were taken over by the Guyana Government.

Before these Guyana developments were foreseen, plans were already under way for the joint development of the important large-scale bauxite resources in the Boké region of the Republic of Guinea, and in the Amazon area of Brazil. These developments, supported by the potential of the Company's large bauxite reserves in Australia, provide the basis for augmenting Alcan's bauxite supply for its long-term requirements.

The alumina operations in Jamaica, based on adequate bauxite reserves, constitute Alcan's other main source of these materials.

Alcan's requirements of alumina for its own smelters and contractual sales commitments in 1971 were some 3.1 million tons. This was produced 40 percent in the Company's Canadian alumina plants, 36 percent in Jamaica, 9 percent in Guyana, and 15 percent being derived from other sources.

From 15 July until the end of 1971, Alcan agreed to purchase rather more than 50 percent of the theoretical full capacity production of metal-grade bauxite and alumina of the government-owned Guyana Bauxite Company. The rated capacity of the Guyana

alumina plant at the time of nationalization was 385,000 tons per annum.

Alcan has agreed to buy limited tonnages of metal-grade bauxite from Guyana Bauxite Company, at favorable prices, in the years 1972 and 1973. The previously unexpected shortfalls in bauxite supply in 1972 and 1973 are being made up by additional shipments from other group and third party sources. To make up for an absence of alumina shipments from Guyana to Canada in 1972 onwards, Alcan is reinforcing the capacity of its Canadian alumina plants and also relies on other internal sources of alumina.

In Jamaica, in 1971, Alcan Jamaica Limited produced 1,130,000 tons of alumina at its two plants. During the year, some difficult process problems were experienced but these are being overcome. A major effort is also being made to offset rising labor rates and higher costs of purchased materials such as caustic and fuel oil.

In Australia, Queensland Alumina Limited, in which Alcan has a 21 percent interest, completed at mid-year an expansion of its alumina plant at Gladstone, to a rated capacity of 1,428,000 tons per annum. In 1971, Alcan received 315,000 tons of alumina from this source. When the current further expansion of the plant to a rated capacity of 2,240,000 tons is completed, in 1973, the plant will be the largest in the world, and Alcan's share of rated capacity will reach 480,000 tons per annum, to be used mainly in its British Columbia and Australia smelters. Alcan is not at present mining in Australia but it holds important bauxite mining rights in Queensland.

In Malaysia, Southeast Asia Bauxites Limited



Alcan Aluminium Limited

Raw Materials

Production in Guinea, West Africa, is planned for 1973 and, in the Amazon region of Brazil, for 1975.

mined and shipped some 550,000 tons of bauxite, mainly to Japanese users, while in France, S.A. des Bauxites et Alumines de Provence produced 500,000 tons for use by European customers.

In the Boké region of the Republic of Guinea, West Africa, construction of rail and port facilities and mining installations for the new large-scale bauxite development, in which Alcan has a participation of 27 percent, made progress towards the commencement of production in 1973. Due to the impact of inflation and other factors, the total cost of the project is now estimated to be approximately \$300 million shared by the Guinea government and the six participating aluminum producers.

Alcan's share of the Boké bauxite production starts at 1.3 million tons per annum and increases progressively to reach 2.6 million tons in the sixth year of operation.

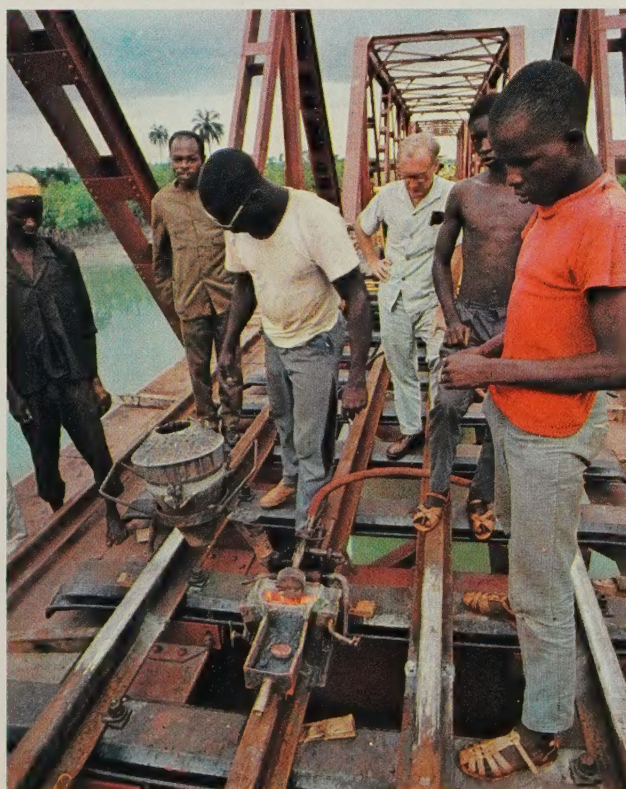
Studies continue into the most economical site, in the European area, for a new alumina plant required to meet increasing alumina

demand and which will utilize the bulk of Alcan's share of the Boké bauxite production.

Engineering of a new bauxite complex in Brazil, in the Amazon basin, based on significant high-grade reserves already confirmed by Alcan, continued in 1971. The Brazilian Government has indicated that it supports the Company's approach to the project. The initial project calls for facilities for the mining and handling of three million tons of bauxite per annum, with shipments to commence early in 1975. The total capital cost of the three million-ton installation is estimated at close to \$90 million, which Alcan expects to finance with other equity participants and through long-term development loans. Bauxite from this source is well suited for treatment in the Company's alumina plants at Arvida, Quebec.

Left, top to bottom: Warehouse construction heralds large-scale bauxite mining in the Amazon region of Brazil.

Bridge links major bauxite deposits with harbour in the Boké region of Guinea, West Africa.



Right, top to bottom: Powerful new draglines help mine Jamaica bauxite for Alcan's alumina plants at Ewarton and Kirkvine.

Two ice-strengthened bulk carriers joined Alcan's fleet in 1971 for year-round shipping in northern waters.



Alcan Aluminium Limited

Smelting

J. W. Cameron

Executive Vice President

Primary production in Alcan Canada and some overseas companies was cut back because of market conditions but was still slightly above 1970.

Primary aluminum production in 1971 by all subsidiary and related companies totalled 1,865,000 tons compared with 1,752,000 tons in 1970, the increases coming mainly in plants which serve national markets.

A modest net increase was recorded by Aluminum Company of Canada, with production of 945,000 tons against 903,000 tons in 1970 when a strike caused the shutdown of the Kitimat smelter for 15 weeks. Production at the Canadian smelters recovered from the strike in the early months of 1971 but was later reduced by successive stages, including a 60,000-ton cut in October, because of the continuing excess of ingot supply on world markets. By the end of the year, the Canadian operations were at an annual rate of about 885,000 tons, or 86 percent of their rated capacity of 1,035,000 tons. It is not foreseen that this rate will be significantly altered up or down during 1972, unless market conditions depart from present expectations.

Production of smelters outside Canada, including affiliates, was 920,000 tons, compared with 849,000 tons in 1970. Some of these, notably in Norway and Japan, made production cuts in the latter part of 1971 to suit market needs. Other smelter subsidiaries, such as those in India, Australia and Brazil, whose output is sold entirely in their own national markets and mainly through their own fabricating facilities, expanded their production to fill local requirements.

In Canada, the three-year collective labor agreements covering the employees in Alcan's four smelters in the province of Quebec expired in December 1971 but operations continued. Negotiations with the National Syndicate of Aluminum Workers for new contracts were still in progress as this report was written.

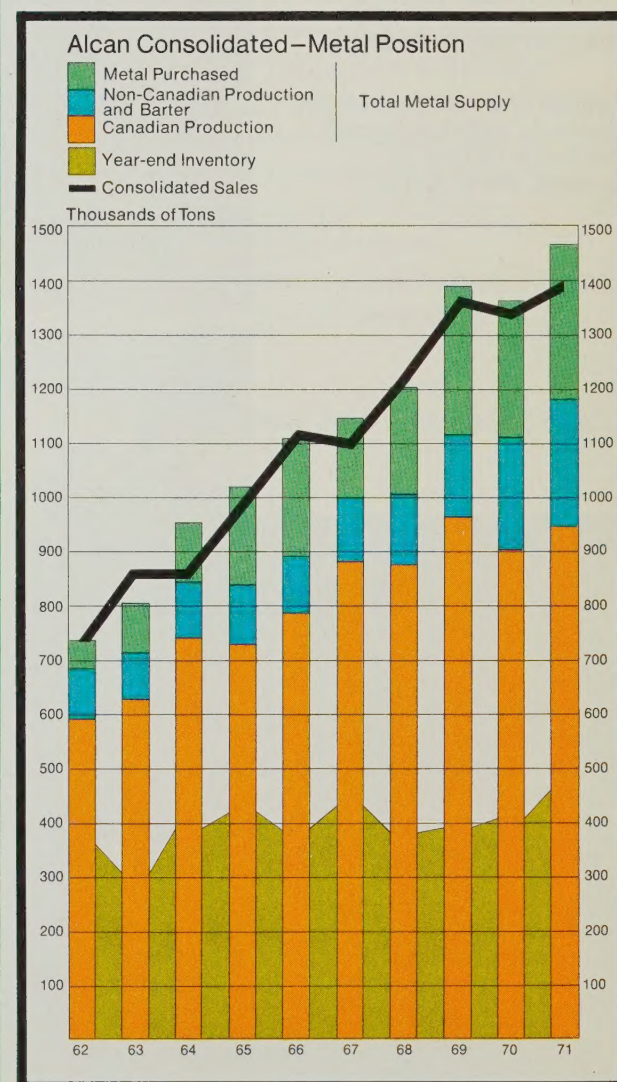
Alcan's second smelter to serve Brazilian needs opened in 1971 at Aratú, near Salvador. Its annual capacity is 11,000 tons.



The objective at all Canadian smelters will continue to be improvements in productivity to help offset inflationary increases in costs. This will involve future substantial investments in capital equipment, together with expanded research and development efforts, as promptly as greater funds can be devoted to these needs. Approximately \$25 million will be provided toward these ends in 1972. Certain adverse cost factors, such as higher imported material prices and lower realizations arising from the upward revaluation of the Canadian dollar in June 1970, are also a concern.

In Australia, Alcan Australia Limited in 1971 completed the expansion of its smelter at Kurri Kurri, New South Wales, to an annual capacity of 50,000 tons from 40,000 tons. Production at the higher rate will be undertaken when required by the company's Australian sales and fabricating outlets, and in the meantime smelter efficiencies are being improved. Production at the Kurri Kurri plant was about 40,000 tons last year.

In Brazil, a subsidiary, Alumínio Minas Gerais, brought its new smelter, at Aratú near Salvador in the north-east region, into initial operation at the end of 1971. The smelter will be fully operational early this year at its planned



Alcan Aluminium Limited

Smelting

Construction of the U.K. smelter was delayed by strikes but India and Japan completed new facilities. The related Norwegian company ASV did not operate at full capacity.

Nearby harbour provides ready access to ocean transportation for Nippon Light Metal Company's smelter and alumina plant at Tomakomai on Hokkaido Island.

11,000-ton capacity, bringing the company's total primary capacity to 42,000 tons. Production in 1971 amounted to about 30,000 tons. Plans provide for further expansion of the Aratú smelter when additional capacity is needed to serve the needs of the Brazilian market, particularly through the fabricating outlets of Alcan Alumínio do Brasil S.A.

In Britain, the construction of a new smelter by Alcan (U.K.) Limited at Lynemouth, near Newcastle, was again delayed by a series of disputes between the contractors and trade unions during much of 1971. These disputes, involving particularly the construction of the coal-fired power plant, set back the smelter start-up more than one year. Under present schedules, it is expected that a limited number of pots will be started this Spring, building up late in 1972 and during 1973, as power becomes available and conditions permit. The Lynemouth smelter is designed with two large potlines, each with an annual capacity of 66,000 tons. Its output will be available to Alcan's fabricating operations in the U.K., and to established ingot customers.

Indian Aluminium Company, in which Alcan has a 65 percent equity, increased its smelter capacity from 77,000 tons to 92,000 tons in 1971, to serve the growing needs of the national Indian market. This increase was achieved at the new Belgaum smelter, in the western state of Mysore, where the capacity was raised to 48,000 tons. Further additions of 28,000 tons at Belgaum, together with bauxite, alumina and fabricating capacity are under active planning but subject to Indian Government approval. Production of Indian Aluminium's three smelters in 1971 was 88,000 tons.

In Japan, Nippon Light Metal Company, Ltd., also 50 percent-owned by Alcan, completed construction of the second potline at its new smelter at Tomakomai on Hokkaido Island, and approximately half of this additional 80,000-ton capacity was in production by year end. The total capacity of its three Japanese smelters is now about 330,000 tons, but actual production in 1971 was some 275,000 tons. Company plans call for capacity to be raised to 410,000 tons, in stages, by the end of 1973, by enlargement of the facilities of the Niigata smelter on the main island of Japan. Reflecting prevailing market conditions, Nippon Light Metal reduced its smelter production rate during the latter part of 1971 and full production is not anticipated in 1972.

In Norway, A/S Ardal og Sunndal Verk (ASV), also owned one-half by Alcan, completed the modernization and rebuilding of one potline at Ardal but the final quarter of the line was not put into production. Some disruption of power supply was suffered due to the effects on transmission lines of severe storms. As a result of these two factors, and the prevailing market conditions, production by ASV smelters in 1971 was only 290,000 tons, about the same as in 1970, compared with present capacity of 325,000 tons.

In Spain, Empresa Nacional del Aluminio, S.A., in which Alcan has a 25 percent interest, made progress towards a 20,000-ton expansion of its smelter at Avilés, scheduled for completion in 1973. Production of this company was about 86,000 tons, unchanged from the preceding year, and was sold mainly in Spain.



Alcan Aluminium Limited

Fabricating and Sales

David M. Culver

Executive Vice President

Although world aluminum consumption gained modestly in 1971, changes in demand varied widely between countries and areas.

1971 was a very trying year for the aluminum industry. But the fault lay more in the pricing area than in consumption. It is now evident that total consumption in the non-communist world had turned down in the second half of 1969 and grew by only three percent in 1970. It appears to have grown by five percent in 1971, and this rate seemed to be accelerating at the end of 1971.

Price performance, however, lagged behind the improvement in consumption. This has always been the case to some extent, and to this was added the impact of excess stocks and excess capacity which prevailed throughout 1971. Together, these influences accounted for the steepest fall in aluminum prices since World War II.

Smelter production rates in the world industry in the early part of the year were too high. North America reacted to this situation sooner than did the rest of the world, with the result that the year's production of primary metal in North America finally turned out to be less than in 1970. Smelter operating rates in Europe and Japan were slowed down in the latter part of 1971, but these areas accounted for most of the increase of more than six percent in free-world production.

Even with the better reaction in North America, it is now apparent that the production cuts in this region came a year too late. And given the prospect — at least on paper — that there will continue to be some excess capacity in place outside North America, it is to be hoped that the rest of the world industry will sharpen its ability to react to the kind of situation faced in 1971. The chart on page 2 of this report illustrates the changes.

Within the five percent increase in total free-world consumption for 1971 (including both primary and secondary aluminum) there are some interesting variations to be noted. For example, consumption grew nine percent in North America but declined three percent in Europe including the U.K.

Germany actually increased its consumption at a rate equal to the world rate of five percent, but the U.K. declined 11 percent and Italy declined 12 percent.

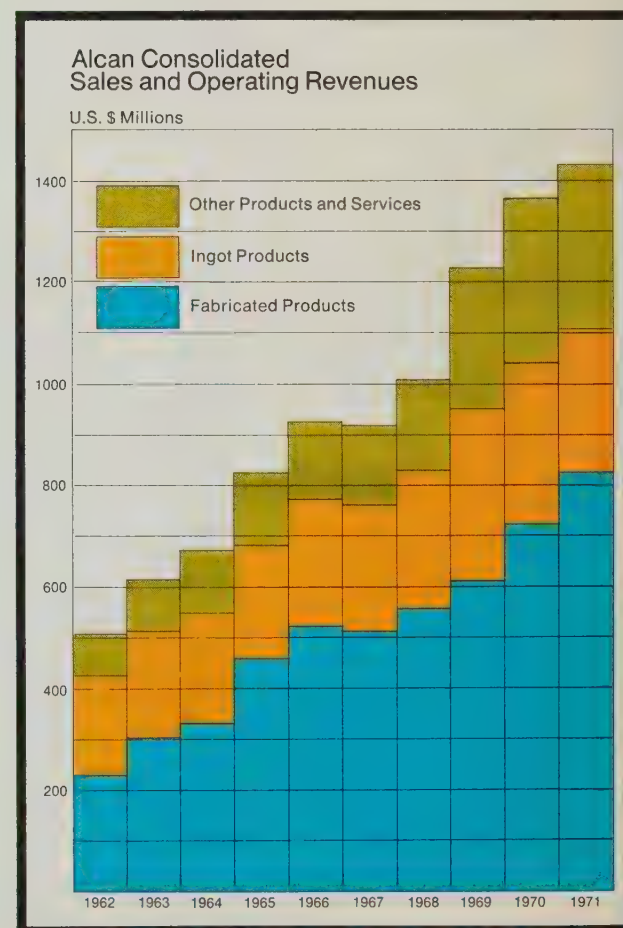
Consumption in France decreased two percent but Japan, which increased 21 percent in 1970, only increased seven percent in 1971. And Australia, with the brakes on, still managed to increase its aluminum consumption by ten percent.

These variations are particularly interesting to Alcan because of our widespread participation in almost all markets.

Against this background, Alcan performed well in relation to industry conditions generally. Our fabricating volume increased 12 percent — well ahead of the average of industry growth. But our ingot sales volume declined four percent, the lesser of two evils considering that the greater impact of the price decline was felt at the ingot level. Throughout the year our inventories were held at normal levels, somewhat above the abnormally low levels at which we went into the year, but satisfactory for the volume of sales obtained.

By mid-1971 we were maintaining a posture designed to carry us through to the point where prices and profits would turn up again. This posture includes restraint on capital expenditures in major fabricating equipment, accent on cost reduction and productivity improvements, and development of the people and marketing skills necessary to integrate forward into certain end products.

Many of our customers also suffered from low prices last year. However, there was at least some evidence that ingot prices fell more than fabricated prices in some of our markets, thereby providing a fortunate few of our customers with the better margins they, and we,





Saguenay Works opened in 1971 to produce reroll stock by a unique process which links continuous casting and rolling. The nearby Arvida smelter supplies molten metal.



From left to right:
At Bracebridge, Ontario, new wire and cable plant will serve the Canadian market for insulated and covered wire and cable products.

Alcan SDC, a new concept in transmission cable, cuts line building and maintenance costs by its remarkably effective "non-vibration" or self-damping characteristics.

Alcan Aluminium Limited

Fabricating and Sales

Important new fabricating plants were completed in Canada and India during the year while significant progress was made in other countries.

sorely need. We have often said that a healthy aluminum industry must provide its user customers with a better living than has been generally available in recent years. We hope this trend will be further confirmed in 1972.

The trend toward regionalism, so evident in the world at large, was once again reflected in many of our organizational, commercial and financial moves. A most important step in this regard was the increased percentage of our Canadian ingot production that was consumed in North America in 1971. As the European Economic Community grows and becomes more self-sufficient in aluminum (including Alcan's own smelter resources, serving our own fabricating outlets) the need to use our Canadian output closer to home increases. The accelerating growth of consumption in North America is most helpful in this regard.

By principal market areas, Alcan's consolidated sales of aluminum in all forms are, as follows, in thousands of tons.

	1967	1968	1969	1970	1971
Canada	130	150	152	160	189
United States	332	393	399	357	387
United Kingdom	172	174	191	222	186
E.E.C.	102	121	158	168	148
All others	368	382	463	439	488
	1,104	1,220	1,363	1,346	1,398

These were among the main developments in Alcan's fabricating activities in 1971:

In Canada, at Arvida, a unique casting and rolling facility, using a "Hazelett" caster which continuously casts thin ingot into widths up to 63 inches, was put into service. The caster works in tandem with a three-stand hot-

rolling mill which reduces the ingot into reroll coils up to 18 tons in weight for further rolling. This facility, built at a cost of \$14 million, is expected to be a major technological advance, perhaps in the future replacing heavy hot mills of much greater capital cost.

At Bracebridge, Ontario, Alcan opened, at a cost of \$9 million, a new plant to produce insulated and covered wire and cable products, mainly for the Canadian market.

In India, at Taloja, near Bombay, a new rolling mill of sophisticated design was brought into production by Indian Aluminium Company. The mill is the fastest of its type in India and is authorized to produce initially 12,500 tons of rolled products per year.

In the United Kingdom, a major rationalization of fabricating operations, and rearrangement of equipment to improve efficiencies, was largely completed.

In Denmark and Italy, Alcan acquired additional equity in existing fabricating operations and these became consolidated subsidiaries.

In Nigeria, further steps were taken to restore Alcan's sheet rolling plant to production after the disruption and damage of civil war.

In Indonesia, Alcan received government approval to install the country's first extrusion press and anodizing plant, in Djakarta.

In New Zealand, Alcan proceeded with the installation of a new extrusion press and of the country's first aluminum foil mill, both to enter service this year.

In 1971, at Taloja, near Bombay, Indian Aluminium Company added a modern sheet mill to its West Coast integrated operations.

Natural steam from deep bores is delivered to geothermal power station near Lake Taupo, New Zealand, by pipes wrapped in aluminum.



Alcan Aluminium Limited

Research and Development

Dr. J. F. Horwood

Chief Technical Officer

Early in 1971 a major realignment of Alcan's worldwide research and development organization was put into effect. This involved the assignment of primary technological responsibility in their respective areas to the three line divisions, Raw Materials, Smelting, and Fabricating & Sales. Each of these divisions, through a vice president — Technology, assumed responsibility for the research laboratories, plant technical development, concept engineering, and the coordination of product development within its assigned area.

In the smelter field, in its continuing effort of effluent control, Alcan has extended its dry-scrubbing technique to cover additional types of potlines. The Company has entered into sales of technique to third parties in the aluminum industry in the United States, and negotiations are proceeding in Europe.

"Lurite" paint, formulated especially for its ability to resist industrial atmospheres common in most urban centres, was introduced following extensive testing by our finishing laboratories in Kingston. Used on residential siding and other applications, it will widen the market for these products.

Developed by a consortium of Alcan, Dominion Foundries and Steel, Ltd., and MLW-Worthington Limited, in Canada, the prototype of a new passenger car for the LRC train (Lightweight, Rapid, Comfortable) was demonstrated to Government and railway industry officials. The unit has a newly designed truck assembly, plus sensor-controlled hydraulic equipment which banks the unit on curves at very high speed, providing a stable, comfortable ride at speeds over 90 miles an hour. High-strength aluminum extrusions for the longitudinal side sills and sheet for the body shell are used. Construction of the diesel motive unit and further testing are proceeding. When completed, the train is expected to operate at up to 120 miles an hour over existing North American tracks.

In a joint venture, Alcan and Procor Limited have a prototype aluminum hopper bulk carrier under advanced development, having just passed the 400-ton squeeze test required by the Association of American Railroads.

Development work is proceeding on cable insulation and on a new higher-quality lithograph plate.

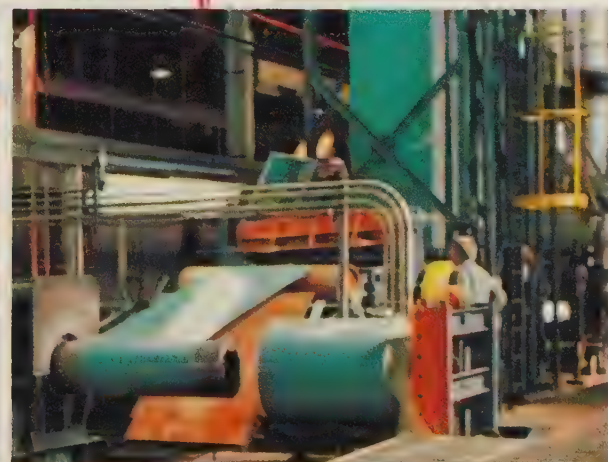
Research initiated in 1958 culminated in a unique process which links an ingot caster and a rolling mill to produce re-rolled stock continuously from molten aluminum.

ALCAN
11x11
→



From left to right:
Exceptional flatness of sheet is ensured by Alcan's AFC® system which controls operation of high-speed rolling mill.

Alcan Lurite, a new series of non-toxic, low-odour, highly durable coatings for aluminum, are produced on Kingston Works paint line.



**Alcan Aluminium
Limited
and Subsidiary
Companies**

**Consolidated
Statement of
Income**

year ending 31 December 1971	in thousands of U.S. dollars	
	1971	1970*
Revenues		
Sales	\$1,381,371	\$1,312,202
Operating revenues	49,472	52,063
Equity in net income of companies 20 - 50% owned (notes 1 and 5)	8,486	10,574
Other income (note 14)	9,796	10,016
	1,449,125	1,384,855
Costs and expenses		
Cost of sales and operating expenses	1,062,525	987,568
Depreciation and depletion (note 7)	97,574	93,946
Selling, research and administrative expenses	118,216	105,910
Interest on debt not maturing within one year	52,289	48,711
Other interest	11,287	11,477
Other expenses (note 15)	4,476	7,163
	1,346,367	1,254,775
Income before following items	102,758	130,080
Income taxes		
Current	38,321	50,701
Deferred (note 7)	(436)	3,097
	37,885	53,798
Income before minority interests and extraordinary item	64,873	76,282
Minority interests	4,696	4,341
Income before extraordinary item	60,177	71,941
Profit from exchange revaluation of Canadian working capital	—	9,029
Net income	\$ 60,177	\$ 80,970
U.S. \$ per common share		
Income per common share (after preferred dividends)		
Before extraordinary item	\$1.75	\$2.11
Extraordinary item	—	.27
Net income	\$1.75	\$2.38

There would be no significant reduction of net income per common share if all the options and conversion privileges described in note 10 had been exercised.

*Reflects the change in equity accounting policy (note 1) and the reclassification of certain items for comparative purposes.

Consolidated
Statement of
Source and
Application
of Funds

year ending 31 December 1971	in thousands of U.S. dollars	
	1971	1970*
Source of funds		
Net income	\$ 60,177	\$ 80,970
Depreciation and depletion	97,574	93,946
Deferred income taxes	(436)	3,097
Cash generation from operations	157,315	178,013
New debt	99,967	123,785
Other	15,617	6,828
	272,899	308,626
Application of funds		
Plant, equipment and investments (net of government development grants, \$15 million in 1971, \$8 in 1970)	153,392	164,941
Debt repayments	112,799	50,893
Dividends on Alcan preferred shares	2,524	2,439
Dividends on Alcan common shares	32,944	39,531
Other	14,294†	(9,384)
	315,953	248,420
Change in working capital	(43,054)	60,206
Working capital — beginning of year	444,012	383,806
Working capital — end of year	\$400,958	\$444,012

†Represents a net decrease in working capital resulting from the deconsolidation of a subsidiary company through nationalization, and the consolidation of two new subsidiary companies. These events also decreased net Plant and equipment by \$27.5 million, Investments by \$11.9 million and Deferred income taxes by \$7.6 million and increased Deferred receivables by \$52.7 million.

Consolidated
Statement of
Retained
Earnings

year ending 31 December 1971	in thousands of U.S. dollars	
	1971	1970*
Retained earnings — beginning of year		
As previously reported	\$571,745	\$533,854
Adjustment for change in equity accounting policy (note 1)	7,142	6,033
As restated	578,887	539,887
Net income	60,177	80,970
	639,064	620,857
Dividends on preferred shares	2,524	2,439
Dividends on common shares	32,944	39,531
	35,468	41,970
Retained earnings — end of year (note 11)	\$603,596	\$578,887

*Reflects the change in equity accounting policy (note 1) and the reclassification of certain items for comparative purposes.

**Alcan Aluminium
Limited
and Subsidiary
Companies**

**Consolidated
Balance Sheet**

Liabilities

31 December 1971	in thousands of U.S. dollars	
	1971	1970*
Current liabilities		
Payables	\$ 202,110	\$ 185,450
Short-term borrowings (principally from banks and in other currencies)	159,780	86,941
Income and other taxes	33,986	37,972
Debt maturing within one year (note 8)	32,471	44,116
	428,347	354,479
 Debt not maturing within one year (note 8)	 739,840	 750,911
Deferred income taxes (note 7)	142,248	150,391
Minority interests (note 9)	114,291	112,225
 Capital stock and retained earnings		
4¼ % Cumulative redeemable convertible preferred shares, par Can. \$40 (note 10)		
Authorized and outstanding — 1,500,000 shares	55,632	55,632
 Common shares, without nominal or par value (note 10)		
Authorized — 60,000,000 shares		
Outstanding — 32,944,072 shares (1970 — 32,943,632)	212,829	212,818
Retained earnings (note 11)	603,596	578,887
	872,057	847,337
	\$2,296,783	\$2,215,343

Notes to Financial Statements

*in millions of
United States dollars*

1. Principles of consolidation

The consolidated financial statements include the accounts of all companies more than 50% owned. Intercompany items and transactions, including profits in inventories, are eliminated.

Under the equity accounting principle, consolidated net income also includes Alcan's equity in the net income of all companies 20-50% owned. This accounting principle, which was first adopted in 1965 for companies 50% owned, was extended in 1971 to include companies owned 20% or more. This change had the effect of in-

creasing consolidated retained earnings at 31 December 1970 by \$7.1 million, consolidated net income for 1971 by \$1.4 million (1970 — \$1.1 million) and the carrying value of Alcan's investments in these companies at 31 December 1971 by \$8.5 million.

When the cost of an investment exceeds the book value of Alcan's equity therein at date of acquisition, the excess is amortized over the estimated useful life of the related fixed assets.

2. Translation of accounts into United States dollars

Accounts, other than United States dollar accounts, included in the consolidated balance sheet are translated at rates of exchange current at year end except that (a) inventories, investments, fixed assets and accumulated depreciation and depletion are at rates current at dates of acquisition, (b) debts not maturing within one year are at

rates current at dates of issue, and (c) deferred income taxes are at rates current at dates of origin. Accounts included in the consolidated statement of income, except depreciation and depletion, are translated at average rates of exchange prevailing during the year.

3. Aluminum, raw materials and other supplies

Aluminum, raw materials and other supplies are stated at cost (determined for the most part on the monthly average

method) or net realizable value, whichever is the lower.

4. Deferred receivables

In July 1971, Alcan's bauxite and alumina assets in Guyana were nationalized and the Government of Guyana agreed to pay over a 20-year period, commencing 31 December 1972, a sum of U.S. \$53.8 million, plus interest

from 1 January 1972 at 6% per annum. This amount is slightly in excess of the net book value of the assets nationalized, which value has been included in Deferred receivables.

5. Investments in companies not more than 50% owned (note 1)

At cost plus equity in undistributed net income since acquisition
Companies 50% owned (cost: 1971 - \$90 million; 1970 - \$83)
Companies 20% to 50% owned (cost: 1971 - \$33 million; 1970 - \$32)
At cost
Companies less than 20% owned

1971	1970
\$134	\$124
34	33
6	13
<u>\$174</u>	<u>\$170</u>

Summarized below are the assets and liabilities of all companies 50% owned, which are located mainly in Germany, Japan and Norway.

Assets

Current assets	\$ 322
Investments	74
Fixed assets	767
Less: Accumulated depreciation	(296)
	<u>\$ 867</u>

Liabilities

Current liabilities	\$ 211
Debt	356
Deferred income taxes	56
Equity	
Alcan	122
Other shareholders	122
	<u>\$ 867</u>

Alcan's share of the net income of companies 50% owned amounted to \$7.1 million in 1971 (\$9.5 in 1970); dividends received from these companies amounted to \$3.8 million in 1971 (\$3.3 in 1970).

Alcan's share of the net income of companies 20% or more but less than 50% owned amounted to \$2.5 million in 1971 (\$2.3 in 1970); dividends received from these companies amounted to \$1.1 million in 1971 (\$1.2 in 1970).

Some of Alcan's non-consolidated companies operate as joint ventures supplying materials to each participant on a cost-sharing basis. The results of their operations are included in the consolidated financial statements as a cost of the materials so obtained.

Notes to Financial Statements

*in millions of
United States dollars*

6. Property, plant and equipment, at cost	1971	1970
Land and water rights	\$ 63	\$ 60
Mineral properties, rights and development	16	18
Raw material, power and other facilities	912	1,021
Smelting facilities	691	624
Fabricating facilities	730	667
	<u>\$2,412</u>	<u>\$2,390*</u>

* Includes \$118 million of assets in Guyana nationalized in 1971 (note 4).

Capital projects are expected to involve the expenditure of some \$150 million in 1972.

7. Depreciation policy and deferred income taxes

Depreciation, as recorded in the accounts, is calculated on the straight-line method using rates based on the estimated useful lives of the respective assets. Depletion, not significant in amount, is calculated on the unit of production basis.

Income tax regulations in Canada, and in certain other countries, permit the use (for the purpose of determining income taxes) of various forms of capital cost allowances which do not coincide with the amount of depreciation recorded in the accounts. These allowances generally exceed straight-line depreciation during the early life of

new assets and later fall short of it.

When capital cost allowances utilized for determining income taxes exceed straight-line depreciation, an amount equivalent to the resultant reduction in current income taxes is charged to income and credited to Deferred income taxes. When the allowances so utilized fall short of straight-line depreciation, resulting in higher current income taxes than would otherwise be payable, an appropriate portion of the amount previously deferred is transferred back to income.

8. Debt not maturing within one year	1971	1970
Aluminum Company of Canada, Ltd		
* Bank loans under \$160 million revolving credit agreement, due 1975/1979	\$100	\$160
9½ % Sinking fund debentures, due 1995	100	92
9¾ % Sinking fund debentures, due 1991 (Can. \$60 million)	59	—
4½ % Sinking fund debentures, due 1980	41	61
5.10% Notes, due 1972/1992	92	94
3½ % Note, due 1974 (Can. \$40 million)	38	38
Other debt, due 1972/1974	30	51
Alcan Aluminium (U.K.) Limited (consolidated)		
* Notes, due 1979/1981 (£15 million)	36	25
8% Debenture stock, due 1981/1986 (£6 million)	15	15
9% Loan stock, due 1989/1994 (£12 million)	28	29
Other debt, due 1975/1994 (£15 million)	37	27
Alcan Aluminum Corporation		
4¾ % Notes, due 1972/1984	38	39
Other debt, due 1972/1990	17	21
Indian Aluminium Company, Limited		
Debentures and bank loans, due 1972/1983 (principally rupees)	33	33
Other companies		
Bank loans	40	38
Debentures and notes	67	70
	<u>771</u>	<u>793</u>
Less: Debt maturing within one year included in current liabilities (equivalent to \$32 million at year-end rates of exchange)	<u>31</u>	<u>42</u>
	<u>\$740</u>	<u>\$751</u>

* Interest fluctuates with lender's prime commercial rate.

After allowing for prepayments, sinking fund and other requirements over the next five years amount to approximately \$31 million in 1972, \$48 in 1973, \$61 in 1974, \$74 in 1975 and \$49 in 1976.

In January 1972, Aluminum Company of Canada, Ltd issued Can. \$40 million of 7½ % Serial debentures, due 1976/1979.

9. Minority interests in subsidiary companies	1971	1970
Preferred shares	\$ 53	\$ 55
Common shares	41	37
Retained earnings	20	20
	<u>\$114</u>	<u>\$112</u>

Alcan Aluminium Limited and Subsidiary Companies

Notes to Financial Statements

in millions of
United States dollars

10. Capital stock

At 31 December 1971, 211,600 Alcan common shares were under option to officers and other employees at various prices, as indicated below, under Share Option Plans approved by the shareholders. During 1971, no further options were granted or exercised.

Option price in Can. \$	Year of grant	Number of Shares			Expiry dates of options
		Shares under option 1 January 1971	Options expired or cancelled in 1971	Shares under option 31 December 1971*	
\$33.875	1961	750	750	—	—
25.875	1963	54,100	7,500	46,600	1973
33.0625	1967	52,500	3,000	49,500	1972
33.0625	1967	115,500	—	115,500	1977
		222,850	11,250	211,600	

* Including shares under options granted to directors and officers of the Company: 18,600 in 1963 and 46,500 in 1967

Options to purchase Alcan shares were also issued in connection with the acquisition in 1969 of a business in the United States. During 1971, options for 440 shares were exercised, leaving options for 3,976 shares outstanding at 31 December 1971. Capital stock account is increased by Can. \$25 per share when the shares are issued.

Under the conversion privileges of the 4¼% cumulative redeemable convertible preferred shares, 1,500,000 common shares are subject to issuance on a share for share basis at any time prior to 15 July 1973. These preferred shares are also subject to redemption in whole or in part at any time at the option of the Board of Directors on thirty days' notice at Can. \$43 per share.

11. Dividend restrictions

Consolidated retained earnings at 31 December 1971 include \$151 million which, pursuant to the provisions of certain debt issues of Aluminum Company of Canada, Ltd,

is not distributable as dividends either in cash or in kind to Alcan, the holder of its common shares.

12. Commitments

Alcan and certain subsidiaries have financial commitments, long-term leases, purchase agreements and tolling arrangements. These include long-term cost sharing joint ventures with other aluminum companies in respect of bauxite mining, alumina production and the semi-fabrication of aluminum. Under these arrangements, the subsidiaries are required to pay their respective share of the operating costs of the facilities, including the amount required to service the long-term debt issues of the joint ventures, and in one case to contribute towards the capital

cost of the project. The fixed portion of the commitments under these and other arrangements amounts to \$10.5 million in 1972, \$15.2 in 1973, \$24.9 in 1974, \$17.0 in 1975, \$19.7 in 1976 and lesser annual amounts up to 1992.

In addition, commitments for charter hire of ships are \$8.8 million in 1972 (\$9.5 paid in 1971), \$6.5 in 1973, \$3.2 in 1974, and lesser annual amounts up to 1981.

See also reference to capital expenditures in note 6 and debt repayments in note 8.

13. Geographical distribution of assets and liabilities

The following is a condensed analysis of the consolidated balance sheet at 31 December 1971, according to the domicile of the constituent companies and their branches.

	North America	South America and Caribbean	United Kingdom and Continental Europe	All Other	Total
Assets					
Current assets	\$ 416	\$ 86	\$ 224	\$ 103	\$ 829
Investments	12	8	96	58	174
Fixed assets	1,532	284	359	237	2,412
Less: Accumulated depreciation	(837)	(142)	(127)	(82)	(1,188)
Other assets	12	59	(1)	—	70
	1,135	295	551	316	2,297
Liabilities					
Current liabilities	181	57	131	60	429
Debt	510	37	137	56	740
Deferred income taxes	129	2	3	8	142
Minority interests	45	11	17	41	114
Alcan preferred shares	56	—	—	—	56
	921	107	288	165	1,481
20 Common Shareholders' Equity	\$ 214	\$ 188	\$ 263	\$ 151	\$ 816

Notes to Financial Statements

in millions of
United States dollars

14. Other income	1971	1970
Income from time deposits	\$ 3.0	\$ 5.3
Net gain on redemption of debt	2.6	3.4
Net gain from disposal of fixed assets and investments	.4	—
Other	3.8	1.3
	<u>\$ 9.8</u>	<u>\$10.0</u>

15. Other expenses		
Supplemental compensation plan	\$ 1.4	\$ 3.6
Net loss on investments and fixed asset disposals	—	1.5
Financing expenses of subsidiaries	1.1	.2
Other	2.0	1.9
	<u>\$ 4.5</u>	<u>\$ 7.2</u>

16. Pension plans

Alcan and its subsidiaries (with some exceptions) have established pension plans in the principal countries where they operate, for the greater part contributory and generally open to all employees. With respect to these plans,

Alcan and its subsidiaries incurred a pension expense of \$11.6 million in 1971 (\$8.0 in 1970). Assets in the pension funds are virtually in balance with the liabilities for pension benefits accrued to 31 December 1971.

17. Remuneration of directors and officers

The Company has 14 directors and four honorary directors, whose remuneration as such was paid by the Company and amounted to \$71,630 in 1971 (\$68,495 in 1970). The Company has 11 officers, including the President and those reporting directly to him, six of whom are directors of the Company. The aggregate remuneration received by

these officers and by past officers amounted to \$1,258,246 in 1971 (\$1,297,796 in 1970) of which \$24,767 was paid by the Company, \$129,533 by Aluminum Company of Canada, Ltd and \$1,103,946 by subsidiary management and service companies.

Auditors' Report

Price Waterhouse & Co.

chartered accountants

5 Place Ville Marie Montreal 113 Que.

8 February 1972

To the Shareholders of Alcan Aluminium Limited

We have examined the consolidated balance sheets of Alcan Aluminium Limited and subsidiary companies as at 31 December 1971 and 1970 and the related consolidated statements of income, retained earnings, and source and application of funds for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and accordingly included such tests of accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion these financial statements present fairly the consolidated financial position of the companies as at 31 December 1971 and 1970 and the results of their operations and the source and application of their funds for the years then ended, in accordance with generally accepted accounting principles which (after giving retroactive effect to the change explained in Note 1) have been applied on a consistent basis.

Price Waterhouse & Co.

Chartered Accountants

A Ten-Year Summary

Adjusted to give effect to changes in accounting practices.

Operating Data (in thousands of tons)

Aluminum sales by consolidated subsidiaries

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Ingot and ingot products	471	531	508	503	561	563	614	742	655	626
Fabricated products	259	331	354	490	554	541	606	621	691	772
Total	730	862	862	993	1,115	1,104	1,220	1,363	1,346	1,398

Fabricated products sales by all subsidiary and related companies

	375	507	579	629	725	701	800	862	937	1,027
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Production of primary aluminum

Canada	596	626	740	728	788	878	873	969	903	945
Subsidiary and related companies outside Canada	194	214	245	269	286	521	585	720	849	920

Consolidated Income Statement Items (in millions of U.S. dollars)

Revenues

Sales of aluminum ingot and ingot products	194	215	219	224	251	249	271	342	321	284
Sales of aluminum fabricated products	231	301	333	461	523	514	560	611	723	821
Sales of all other products	40	54	73	87	100	104	127	224	272	277
Operating revenues	44	46	51	55	53	52	49	48	48	49
Equity in net income of companies 20-50% owned	4	4	5	4	4	7	7	11	11	8
Other income	8	5	7	7	6	8	15	14	10	10
	521	625	688	838	937	934	1,029	1,250	1,385	1,449

Income before income taxes

Income taxes	64	64	99	119	132	107	135	155	130	103
Minority interests and Alcan preferred dividends	30	29	45	56	58	44	59	65	54	38
Extraordinary gains	4	6	7	8	6	6	5	7	7	7
Net income for common stock	—	—	—	—	11	—	—	—	9	—
	30	29	47	55	79	57	71	83	78	58

Consolidated Balance Sheet Items (in millions of U.S. dollars)

Working capital	219	275	277	308	306	399	323	384	444	401
Property, plant and equipment (net)	944	944	938	1,003	1,043	1,074	1,085	1,130	1,223	1,224
Investments in companies owned 50% or less	54	57	63	59	60	118	157	177	170	174
Long-term debt	562	547	520	575	566	676	608	668	751	740
Deferred income taxes	133	136	137	138	146	150	148	144	150	142
Minority interests	78	78	78	82	82	81	84	92	112	114
Shareholders' equity	461	534	562	592	645	710	747	808	847	872
Total assets	1,378	1,440	1,465	1,586	1,664	1,823	1,867	2,047	2,215	2,297

Per Share of Common Stock (in U.S. dollars)

Net income (after preferred dividends but before extraordinary gains)	0.98	0.95	1.53	1.78	2.19	1.74	2.17	2.52	2.11	1.75
Extraordinary gains	—	—	—	—	0.36	—	—	—	0.27	—
Net income (including extraordinary gains)	0.98	0.95	1.53	1.78	2.55	1.74	2.17	2.52	2.38	1.75
Dividends paid	0.60	0.60	0.65	0.82	0.92	1.00	1.02	1.12	1.20	1.00
Cash generation	2.84	2.97	3.62	4.07	5.06	4.14	4.63	4.94	5.33	4.77
Book value	14.99	15.41	16.30	17.27	18.91	20.27	21.42	22.85	24.03	24.78

Other Statistics

Capital expenditures (in millions of U.S. dollars)	62	65	67	133	113	176	136	156	165	153
Cash generation (in millions of U.S. dollars)	87	93	115	129	160	136	152	165	178	157
Return on average equity (as a percentage)	6.6	6.2	9.1	10.0	13.2	8.7	10.0	11.0	9.8	7.0
Number of common stock shareholders at year end (thousands)	54	51	50	52	57	67	73	72	76	70
Number of employees at year end (thousands)	50	53	54	60	64	63	61	62	67	61

Alcan Aluminum Corporation

In less than ten years, a major U.S. fabricator

Long a supplier of ingot from Canada to the U.S.A., Alcan also now operates an extensive network of fabricating plants and service centres.

World's fastest aluminum rolling mill at Oswego, N.Y., produces high-quality sheet at speeds up to 100 miles per hour.

Of all countries in the world, the United States is the largest user of aluminum, consuming each year about one of every two tons of all such metal sold in the non-Communist areas.

Alcan has long been a major participant in the U.S. aluminum market, first as an ingot supplier and more recently as a fabricator as well.

Alcan has made its major commercial effort in the past 25 years, after wartime experience demonstrated the value to the U.S. of Canadian primary aluminum sources. In the postwar period, the U.S. has found it useful to rely on imports to supplement its aluminum supply, even as the U.S. was itself an exporter to world markets.

Alcan's traditional role was until 1963 that of a specialist ingot supplier to independent U.S. fabricators who do not possess their own smelting facilities. With its abundant resources of hydroelectric power in Canada, Alcan is well placed to supply aluminum to America, whose own sources of energy are under growing pressure from a multitude of needs.

In the late 1950's and early 1960's, changing conditions in the U.S. industry resulted in a reduced demand on Alcan for ingot, while independent companies in the sheet-rolling and cable-making sectors found conditions increasingly difficult. In these circumstances Alcan found it essential to enter U.S. fabricating itself to preserve the viability of some

of these outlets and thus to assure a continued market for Alcan ingot in the U.S.A.

Through acquisition and establishment of new operations, the present subsidiary, Alcan Aluminum Corporation, has become in less than ten years the fourth largest aluminum fabricator in the United States. With corporate headquarters in Cleveland, Ohio, it has assets in excess of \$300 million, annual revenues of more than \$450 million, and 4,500 employees. Its operations include 12 major fabricating plants, 17 metal service centres, eight specialized service facilities and over 30 sales offices.

The company's principal products include bare, embossed and coated sheet and coil; aluminum plate; foil products and containers; metal powders and pigments; electrical conductor cable and related hardware; residential, commercial, rural, and mobile home building products and accessories. It continues its major role in selling aluminum ingot and ingot products, distributes other important metals including nickel, stainless steel and copper, and sells chemicals. The company operates under eight main divisions.

Alcan first entered the U.S. fabricating scene in 1961 when it joined with three partners, independent sheet companies, to build at a cost of \$50 million a 200,000-ton hot-rolling mill at Oswego, New York, which none of the four partners could justify undertaking alone.



Alcan Aluminum Corporation

Rapid expansion in the U.S.A.

(Continued)

Several U.S. plants acquired by Alcan have been expanded and modernized while new facilities have been built.

Fabricating plants, metal service centres and sales offices in 26 states illustrate Alcan's rapid growth in the United States in less than ten years.

The plant began operation in 1963 and is now one of the largest aluminum mills in the world.

Even this partnership was unable to solve the difficulties of the independent rollers at that time, so in 1965 Alcan acquired the shares of its partners in the Oswego operation and formed these into a new fully-owned subsidiary, Alcan Aluminum Corporation. In the process, Alcan also acquired some of the partners' plants in Warren (Ohio), South Kearny (New Jersey), Fairmont (West Virginia) and Riverside (California). Thus began Alcan's U.S. sheet and plate division which has since expanded and modernized its manufacturing activities, particularly towards the building products markets.

More than half of the U.S. fabricating capital is now invested in sheet installations. Whereas six years ago they included many pieces of old-fashioned equipment, today they are modernized and efficient and able to compete effectively in the U.S. market. The experienced staffs and employees who joined Alcan at the outset in the U.S. were, of course, a foundation for this growth.

In 1970 the Company added at Oswego major cold-rolling facilities and, in 1971, a cutting and finishing line to supply sheet products in a variety of forms. The cold mill is believed to be the fastest for rolling any metal in the world and has achieved production speeds of

some 100 miles per hour.

With the completion of the Oswego cold-rolling facilities, Alcan expects to become a qualified supplier of canning sheet to U.S. can producers and to supply important quantities of this product. Canning has been, of course, one of the two fastest growing markets for aluminum sheet in the United States, using 450,000 tons per year.

At Warren, Ohio, in addition to sheet-rolling, Alcan has installed a paint line which is one of the largest and fastest installations anywhere for coating and painting aluminum sheet.

The Alcan Cable Division, second largest in terms of assets, developed from the acquisition of Central Cable Corporation, in 1963. This division now has three modern cable plants at Atlanta (Georgia), Williamsport (Pennsylvania) and near Sacramento (California). It fabricates power transmission and distribution cable, bare and covered, and underground distribution cable for the power industry. The volume of aluminum processed has grown 500 percent in eight years of Alcan ownership. The two rod mills in east and west, with total capacity of 100,000 tons per year, will support further expansion of cable production, presently rated at 45,000 tons, as U.S. power consumption continues to grow. More specialized and diversified products, such as covered conductor and wire, are





Alcan Aluminum Corporation

Alcan's U.S. activities include a heavy emphasis on building products; metal powders, foil products and distribution networks are also significant.

Roof of experimental aluminum shingles on a U.S. home, which also features the familiar aluminum siding, shutters, patio cover and rainware.

also being developed.

Alcan Aluminum Corporation's most important U.S. market, accounting for about one-third of its total fabricated shipments, is in the building and construction field, particularly housing. The Alcan Building Products Division markets one of the broadest lines of house improvement products in the industry: aluminum siding, awnings, carports, patio covers, canopies, venetian blinds, rainware, shutters, building facings and soffits, and fencing. Alcan is also a major supplier to the mobile home industry, one of the fast-growing sources of low-cost housing. Fabral Corporation, 50 percent-owned, manufactures metal roofing and siding for rural, and industrial buildings.

The Western Division, with plant at Riverside, California, produces and markets sheet and building products for ten western states and produces them for sale by other divisions. At this location, commercial production is under way of aluminum compressed gas cylinders for such purposes as scuba-diving equipment and other uses.

Alcan Metal Powders Division resulted from the acquisition of Metals Disintegrating Corporation in 1963. A highly-diversified producer of powders from several metals including aluminum, it pioneered the manufacture of finely divided metal more than 50 years ago. It also invented and developed the process now

used throughout the world to produce aluminum pigments. The division's products from plants in New Jersey and in California are used in the paint, coating, chemical, explosives, aerospace and allied industries.

With the installation of a light-gauge sheet mill at Fairmont, West Virginia, Alcan is able to produce heavy-gauge foil. The Alcan Foil Division markets foil products, housewares, bakeware and commercial bakery pans. It produces foil containers for the convenience food industry and markets foil for industrial uses. It operates two plants and several service centres.

The Metal Goods Division is Alcan's distribution organization of 17 metal service centres in major marketing areas of the U.S. With headquarters in St. Louis, these centres sell aluminum, nickel, brass, copper, steel and stainless steel products tailored to industry requirements.

Alcan Sales Division, the other distribution division, has headquarters in New York and seven main sales offices. It sells aluminum ingot products, particularly extrusion ingot, to independent U.S. extruders and casting ingot, to independent foundries. It also sells various grades of alumina and aluminum-based chemicals to the refractory, abrasives, glass, paper and ceramic industries. Total sales of this division in 1971 were in excess of \$100 million.

The sheet-rolling plant at Warren, Ohio, also boasts one of the world's fastest and most efficient paint lines for aluminum sheet.

Automated welding creates shower of sparks at the Williamsport, Pa., plant for bare and covered electrical conductors.

Farm buildings are protected by roofing and siding panels manufactured by Fabral Corporation of Lancaster, Pa.

Alcan has service centers in 20 states: bottom left, Building Products Center at Lakeland, Fla. Right, Metal Goods Service Center, Philadelphia, Pa.





Alcan subsidiaries and related companies in 34 countries

NORTH AMERICA: Canada, United States, Bermuda

CARIBBEAN: Guyana, Jamaica, Trinidad

LATIN AMERICA: Argentina, Brazil, Colombia, Mexico, Uruguay, Venezuela

EUROPE: Belgium, Denmark, France, Germany, Ireland, Italy,
Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom

AFRICA: Ghana, Guinea, Nigeria, South Africa

ASIA: India, Japan, Malaysia, Thailand

SOUTH PACIFIC: Australia, New Zealand